CIRM Bridges to Stem Cell Research and Therapy Training Grant

Grant Award Details

CIRM Bridges to Stem Cell Research and Therapy Training Grant

Grant Type: Bridges

Grant Number: EDUC2-12611

Project Objective: This certificate-granting program provides technical training, mentorship, and professional development to prepare undergraduate and/or masters students for joining the academic or industry workforce in stem cell research, gene therapy, and regenerative medicine. Training is supplemented with community outreach, patient engagement activities, with an emphasis on inclusivity throughout the curriculum. Internships are 12 months and students are drawn from SSU San Marcos and partnering community colleges.

Investigator:

Name:	Bianca Mothe
Institution:	Cal State Univ, San Marcos
Type:	PI

Award Value: $3,606,500

Status: Active

Grant Application Details

Application Title: CIRM Bridges to Stem Cell Research and Therapy Training Grant

Public Abstract:

California is a leader in advancing stem cell and regenerative medical research and programs that create a pipeline for the training and development of the next generation of stem cell scientists in the field, which are critically needed. Our program provides an opportunity to diverse college students to receive high quality technical training, mentorship, and professional development. Program components include placing trainees at host site labs in academia or industry in a stem cell research lab that culminates with presentation of their project at scientific conferences. The number of host site lab placements offer a wide range of stem cell related research topics under well-recognized researchers in the region.

We supplement the internship experience with K-12 outreach, patient engagement and advocacy, mentee training, education, and professional development programming. Trainees earn college credit towards application of a four-year degree by engaging in the supplementary activities. Our goal is to provide a broad and comprehensive view of the field and develop "stem cell ambassadors", who are ready to engage people in their personal and professional networks in effective communication on the impact of stem cell research.

Our program is unique and closes an opportunity gap for students in our region. We recruit from our four-year university and four community colleges that offer life science and biotechnology coursework, certificate, and degree programs. Similar to our regional population demographics, students attending these institutions are racially and socioeconomically diverse and have differential educational backgrounds and life experiences. We train 10 students per year, who are representative of our region and often remain in the area to join the scientific workforce. Therefore, California will benefit from this additional pool of well-prepared stem cell scientists from diverse backgrounds that have a broad understanding of the benefits of stem cell research and can continue to advocate and accelerate California's commitment to advancing stem cell research, treatments and therapies for human diseases.

Statement of Benefit to California:

California is a leader in advancing stem cell and regenerative medicine and the field is progressing rapidly towards viable therapies and cures for human disease. In order to continue to accelerate this progress and drive future innovation, we must provide a pipeline for the training and development of a diverse pool of stem cell scientists. Our program is designed to meet this need by providing an opportunity for diverse college students to receive comprehensive training and education allowing them to enter this field more quickly than traditional pathways. Additionally, we develop well rounded stem cell researchers who understand the full "bench to bedside" process of bringing treatments to the clinic. Simultaneously, they learn the need for public communication and outreach so that the regional community understands the benefits from their research.

Our institution has partnered with four regional community colleges to ensure recruitment from these diverse student populations. We deliver a robust and comprehensive internship program from primarily the undergraduate and graduate levels for an intensive year-long research experience at academic or biotechnology industry laboratories. Trainees focus on a variety of applications of stem cell research to treat complex neurological diseases such as Alzheimer's, Parkinson's and autism, and other disease targets such as cancer and diabetes. Our student trainees receive college credit and will be supported by educational enhancement and patient advocacy activities through community organizations. At the end of their internship year, our trainees will be prepared to contribute to California's workforce pipeline and/or continue their academic journeys.

Our program impact is significant. We will train 10 trainees each year, who are representative of our diverse region and often remain in the area to join the scientific workforce. Therefore, California will benefit from this additional pool of well-prepared stem cell scientists from diverse backgrounds that have a broad understanding of the benefits of stem cell research and can continue to advocate and accelerate California's commitment to advancing stem cell research, treatments and therapies for human diseases.

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